

## ABSTRACT OF THE DISCLOSURE

If a tool breakage occurs, a cutting time  $T$  and a maximum value (absolute value)  $G$  of a slope of a drop in a cutting load become small. A cutting load integrated value  $S$  increases as a tool wears and becomes small when the breakage occurs. Therefore, these values  $T$ ,  $G$ , and  $S$  are obtained in a machining cycle, moving variable thresholds are obtained (updated) based on values  $T$ ,  $G$ , and  $S$  obtained in a preceding machining cycle, and the thresholds and the values  $T$ ,  $G$ , and  $S$  obtained in the current machining cycle are compared with each other to thereby determine an abnormal condition of the tool.